

ABSTRACT

It is an object of the present invention to provide a magnetic field generator for MRI with which it is possible to lower the residual magnetism and eddy current within pole pieces generated by the effect of the pulse current flowing through Gradient magnetic field coils, without decreasing the field uniformity within the air gap. Pole pieces 40 in which a main component 41 consisting of laminated silicon steel sheets is effectively combined with a magnetic annular protrusion 42 disposed on the side on the main component 41 facing the air gap, the result of which is the formation of a static magnetic field having the desired uniformity within the air gap without leading to a state of magnetic saturation in the vicinity of the magnetic annular protrusion 42. This also makes possible a reduction in the residual magnetism and eddy current within the pole pieces 40 generated by the effect of the pulse current flowing through Gradient magnetic field coils.